

Appl. No. 10/645,821
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PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently amended) A computer-implement method of accessing a
2 ~~portion of multimedia information stored in a multimedia document~~ using a paper document, the
3 method comprising:
4 ~~receiving by a computer an identifier from a selection of one or more identifiers~~
5 ~~from a first set of identifiers printed on the paper document, which indexes the multimedia~~
6 ~~information;~~
7 ~~receiving by a computer at least one identifier representative of at least one bar~~
8 ~~code scanned by a user from among a plurality of bar codes printed on the paper document, each~~
9 ~~bar code corresponding to a point in time in the multimedia document;~~
10 determining by the computer one or more time ranges, ~~from a plurality of time~~
11 ~~ranges, which are temporally consecutive and respectively associated with a plurality of~~
12 ~~consecutive portions of the multimedia information, based upon the one or more at least one~~
13 ~~identifier[[s]], each time range having a start time and an end time; and~~
14 determining by the computer one or more [[of the]] portions of [[the]] multimedia
15 information corresponding to the one or more time ranges, wherein [[a]]each portion of
16 multimedia information ~~corresponding to a time range~~ comprises information from the
17 multimedia ~~document information~~ occurring between the start time and end time associated with
18 the corresponding time range; and
19 ~~receiving by the computer another identifier of selection of one or more identifiers~~
20 ~~from a second set of identifier printed on the paper document;~~
21 ~~determining by the computer one or more operations of the multimedia~~
22 ~~information based upon the one or more identifiers selected from the second set of identifiers;~~
23 and

24 outputting by the computer for play on the computer or a remote computer the
25 portions of [[the]] multimedia information corresponding to ~~the at least one time range from the~~
26 one or more time ranges,

27 wherein the step of determining one or more time ranges comprises one of:
28 determining a first time associated with a first identifier from among said
29 at least one identifier and determining a second time associated with a second identifier
30 from among said at least one identifier; or
31 subtracting a first time amount from a time value associated with the at
32 least one identifier to produce a first time and adding a second time amount to the time
33 value associated with the at least one identifier to produce a second time,
34 wherein the one or more time ranges comprises the first time and the
35 second time.

1 2. (Currently amended) The method of claim 1 wherein:
2 the multimedia information comprises information of a first type and information
3 of a second type; and
4 ~~the one or more time ranges includes a first time range; and~~
5 the step of determining by the computer one or more portions of [[the]]
6 multimedia information comprises determining at least one of information of the first type and
7 information of the second type from the multimedia ~~document information~~ occurring between
8 the [[start]]first time and [[end]]second time ~~associated with the first time range.~~

1 3. (Original) The method of claim 2 wherein the information of the first type
2 is video information and the information of the second type is at least one of audio information
3 and closed-caption text information.

4-8. (Canceled)

1 9. (Currently amended) The method of claim ~~[[8]]~~1 wherein the first time
2 amount ~~of time~~ and the second time amount ~~of time~~ are determined using information received
3 from the user ~~user-configurable~~.

10-12. (Canceled)

1 13. (Currently Amended) The method of claim 1 wherein performing the at
2 least one operation comprises communicating by the computer the portions of ~~[[the]]~~ multimedia
3 information ~~corresponding to the at least one time range~~ to a recipient.

1 14. (Currently amended) The method of claim 13 wherein ~~communicating~~
2 outputting the portions of ~~[[the]]~~ multimedia information ~~corresponding to the at least one time~~
3 ~~range to the recipient~~ comprises communicating by the computer the portions of ~~[[the]]~~
4 multimedia information via an electronic mail addressed to the recipient.

1 15. (Currently amended) The method of claim 13 wherein ~~communicating~~
2 outputting the portions of ~~[[the]]~~ multimedia information ~~corresponding to the at least one time~~
3 ~~range to the recipient~~ comprises communicating by the computer the portions of ~~[[the]]~~
4 multimedia information via facsimile.

1 16. (Currently amended) The method of claim ~~[[11]]~~1 wherein ~~performing the~~
2 ~~at least one operation~~ comprises further comprising deleting by the computer the portions of
3 ~~[[the]]~~ multimedia information ~~corresponding to the at least one time range from the multimedia~~
4 ~~information~~.

1 17. (Currently amended) The method of claim ~~[[11]]~~1 wherein ~~performing the~~
2 ~~at least one operation~~ comprises further comprising printing by the computer a representation of
3 the portions of ~~[[the]]~~ multimedia information ~~corresponding to the at least one time range~~ on a
4 paper medium to generate a second paper document.

1 18. (Currently amended) The method of claim ~~[[11]]~~1 wherein performing the
2 ~~at least one operation comprises~~ further comprising storing by the computer the portions of ~~[[the]]~~
3 multimedia information ~~corresponding to the at least one time range~~.

1 19. (Currently amended) The method of claim 1 further comprising:
2 receiving by the computer information indicative of selection of one or more
3 additional identifiers from a ~~second~~ set of identifiers printed on the paper document;
4 determining by the computer one or more operations based upon the one or more
5 additional identifiers from the ~~second~~ set of identifiers; and
6 performing at least one operation from the one or more operations on the portions
7 of ~~[[the]]~~ multimedia information corresponding to the one or more time ranges.

1 20. (Currently amended) The method of claim 19 wherein performing the at
2 least one operation comprises ranking by the computer the one or more time ranges based upon
3 contents of the portions of ~~[[the]]~~ multimedia information corresponding to the one or more time
4 ranges.

1 21. (Currently amended) The method of claim 20 wherein ranking the one or
2 more time ranges comprises:
3 for each time range in the one or more time ranges, determining by the computer
4 a relevance of a user-specified criterion with the portion of ~~[[the]]~~ multimedia information
5 corresponding to the time range ~~to a user-specified criterion~~; and
6 ranking by the computer the one or more time ranges based upon the relevance of
7 the user-specified criterion with the portions of ~~[[the]]~~ multimedia information corresponding to
8 the time ranges ~~to the user-specified criterion~~.

1 22. (Original) The method of claim 21 wherein the user-specified criterion
2 identifies a topic of interest.

1 23. (Currently amended) The method of claim 19 wherein performing the at
2 least one operation comprises grouping by the computer the one or more time ranges into one or
3 more groups based upon contents of the portions of ~~[[the]]~~ multimedia information
4 corresponding to the one or more time ranges.

1 24. (Currently amended) A system comprising:
2 at least one processor;
3 a memory operatively coupled to the processor, the memory storing program
4 instructions that when executed by the processor, cause the processor to:
5 ~~receive an identifier from a selection of one or more identifiers from a first~~
6 ~~set of identifiers printed on the paper document, which indexes the multimedia~~
7 ~~information;~~
8 receive at least one identifier representative of at least one bar code
9 scanned by a user from among a plurality of bar codes printed on the paper document,
10 each bar code corresponding to a point in time in a multimedia document;
11 determine one or more time ranges, ~~from a plurality of time ranges, which~~
12 ~~are temporally consecutive and respectively associated with a plurality of consecutive~~
13 ~~portions of the multimedia information,~~ based upon the ~~one or more~~ at least one
14 identifier~~[[s]]~~, each time range having a start time and an end time; and
15 determine one or more ~~[[of the]]~~ portions of ~~[[the]]~~ multimedia
16 information corresponding to the one or more time ranges, wherein ~~[[a]]~~ each portion of
17 multimedia information ~~corresponding to a time range~~ comprises information from the
18 multimedia ~~document information~~ occurring between the start time and end time
19 associated with the corresponding time range;
20 ~~receive another identifier of selection of one or more identifiers from a~~
21 ~~second set of identifiers printed on the paper document;~~
22 ~~determine one or more operations of the multimedia information based~~
23 ~~upon the one or more identifiers selected from the second set of identifiers; and~~

24 output for play on the computer or a remote computer the portions of
25 ~~[[the]]~~ multimedia information corresponding to ~~the at least one time range from~~ the one
26 or more time ranges,

27 wherein the one or more time ranges are determined by program
28 instructions that when executed by the processor cause the processor to:

29 determine a first time associated with a first identifier from among
30 said at least one identifier and determine a second time associated with a second
31 identifier from among said at least one identifier; or

32 subtract a first time amount from a time value associated with the
33 at least one identifier to produce a first time and add a second time amount to the
34 time value associated with the at least one identifier to produce a second time,

35 wherein the one or more time ranges comprises the first time and
36 the second time.

1 25. (Currently amended) The system of claim 24 wherein:
2 the multimedia document information comprises information of a first type and
3 information of a second type; and
4 ~~the one or more time ranges includes a first time range; and~~
5 the program instructions when executed by the processor, cause the processor to
6 determine at least one of information of the first type and information of the second type from
7 the multimedia document information occurring between the [[start]]first time and [[end]]second
8 ~~time-associated with the first time range.~~

1 26. (Original) The system of claim 25 wherein the information of the first
2 type is video information and the information of the second type is at least one of audio
3 information and closed-caption text information.

27-31. (Canceled)

1 32. (Currently amended) The system of claim ~~[[31]]~~24 wherein the first time
2 amount ~~of time~~ and the second time amount ~~of time~~ are user-configurable.

33-35. (Canceled)

1 36. (Currently amended) The system of claim 24 wherein the program
2 instructions when executed by the processor, cause the processor to communicate the portions of
3 ~~[[the]]~~ multimedia information ~~corresponding to the at least one time range~~ to a recipient.

1 37. (Currently amended) The system of claim 36 wherein the program
2 instructions when executed by the processor, cause the processor to send the portions of ~~[[the]]~~
3 multimedia information to the recipient via an electronic mail.

1 38. (Currently amended) The system of claim 36 wherein the program
2 instructions when executed by the processor, cause the processor to communicate the portions of
3 ~~[[the]]~~ multimedia information via facsimile.

1 39. (Currently Amended) The system of claim ~~[[34]]~~24 wherein the program
2 instructions when executed by the processor, cause the processor to delete the portions of ~~[[the]]~~
3 multimedia information ~~corresponding to the at least one time range~~ from the multimedia
4 document information.

1 40. (Currently amended) The system of claim ~~[[34]]~~24 wherein the program
2 instructions when executed by the processor, cause the processor to print a representation of the
3 portions of ~~[[the]]~~ multimedia information ~~corresponding to the at least one time range~~ on a
4 paper medium to generate a second paper document.

1 41. (Currently amended) The system of claim ~~[[34]]~~24 wherein the program
2 instructions when executed by the processor, cause the processor to store the portions of ~~[[the]]~~
3 multimedia information ~~corresponding to the at least one time range~~.

1 42. (Currently amended) The system of claim 24 wherein the program
2 instructions when executed by the processor, cause the processor to: receive information
3 indicative of selection of one or more additional identifiers from a ~~second~~-set of identifiers
4 printed on the paper document, determine one or more operations based upon the one or more
5 additional identifiers from the ~~second~~-set of identifiers, and perform at least one operation from
6 the one or more operations on portions of [[the]] multimedia information corresponding to the
7 one or more time ranges.

1 43. (Currently amended) The system of claim 42 wherein the program
2 instructions when executed by the processor, cause the processor to rank the one or more time
3 ranges based upon contents of the portions of [[the]] multimedia information corresponding to
4 the one or more time ranges.

1 44. (Currently amended) The system of claim 43 wherein the program
2 instructions when executed by the processor, cause the processor to: for each time range in the
3 one or more time ranges, determine relevance of the portion of the multimedia information
4 corresponding to the time range to a user-specified criterion, and rank the one or more time
5 ranges based upon the relevance of the portions of [[the]] multimedia information ~~corresponding~~
6 ~~to the time ranges~~ to the user-specified criterion.

1 45. (Original) The system of claim 44 wherein the user-specified criterion
2 identifies a topic of interest.

1 46. (Currently amended) The system of claim 42 wherein the program
2 instructions when executed by the processor, cause the processor to group the one or more time
3 ranges into one or more groups based upon contents of the portions of [[the]] multimedia
4 information corresponding to the one or more time ranges.

1 47. (Currently amended) A computer program product for accessing ~~a portion~~
2 ~~of~~ multimedia information stored in a multimedia document using a paper document, the
3 computer program product comprising:

4 a computer-readable storage medium having stored thereon computer program
5 code, the computer program code comprising:

6 ~~code for receiving by a computer an identifier from a selection of one or~~
7 ~~more identifiers from a first set of identifiers printed on the paper document, which~~
8 ~~indexes the multimedia information;~~

9 code for receiving by a computer at least one identifier representative of at
10 least one bar code scanned by a user from among a plurality of bar codes printed on the
11 paper document, each bar code corresponding to a point in time in the multimedia
12 document;

13 ~~code for determining by the computer one or more time ranges, from a~~
14 ~~plurality of time ranges, which are temporally consecutive and respectively associated~~
15 ~~with a plurality of consecutive portions of the multimedia information, based upon the~~
16 ~~one or more~~ at least one identifier[[s]], each time range having a start time and an end
17 time; [[and]]

18 code for determining by the computer one or more [[of the]] portions of
19 [[the]] multimedia information corresponding to the one or more time ranges, wherein
20 [[a]] each portion of multimedia information corresponding to a time range comprises
21 information from the multimedia document ~~information~~ occurring between the start time
22 and end time associated with the corresponding time range; and

23 ~~code for receiving by the computer another identifier of selection of one or~~
24 ~~more identifiers from a second set of identifiers printed on the paper document;~~

25 ~~code for determining by the computer one or more operations of the~~
26 ~~multimedia information based upon the one or more identifiers selected from the second~~
27 ~~set of identifiers; and~~

code for outputting by the computer for play on the computer or a remote
computer the portions of ~~[[the]]~~ multimedia information corresponding to ~~the at least one~~
~~time range from~~ the one or more time ranges,
wherein the code for determining one or more time ranges includes one of:
code for determining a first time associated with a first identifier
from among said at least one identifier and determining a second time associated
with a second identifier from among said at least one identifier; or
code for subtracting a first time amount from a time value
associated with the at least one identifier to produce a first time and adding a
second time amount to the time value associated with the at least one identifier to
produce a second time,
wherein the one or more time ranges comprises the first time and
the second time.

48. (Currently Amended) The computer program product of claim 47
wherein:
the multimedia information comprises information of a first type and information
of a second type; and
~~the one or more time ranges includes a first time range; and~~
the code for determining portions of the multimedia information comprises code
for determining at least one of information of the first type and information of the second type
from the multimedia information occurring between the ~~[[start]]~~first time and ~~[[end]]~~second time
~~associated with the first time range.~~

49. (Previously presented) The computer program product of claim 48
wherein the information of the first type is video information and the information of the second
type is at least one of audio information and closed-caption text information.

50-54. (Canceled)

1 55. (Currently amended) The computer program product of claim ~~[[54]]~~47
2 wherein the first time amount ~~of time~~ and the second time amount ~~of time~~ are user-configurable.

56-58. (Canceled)

1 59. (Currently amended) The computer program product of claim 47 wherein
2 the code for outputting ~~performing the at least one operation~~ comprises code for communicating
3 the portions of ~~[[the]]~~ multimedia information ~~corresponding to the at least one time range~~ to a
4 recipient.

1 60. (Currently amended) The computer program product of claim 59 wherein
2 the code for communicating the portions of ~~[[the]]~~ multimedia information ~~corresponding to the~~
3 ~~at least one time range~~ to the recipient comprises code for communicating the portions of ~~[[the]]~~
4 multimedia information via an electronic mail addressed to the recipient.

1 61. (Currently amended) The computer program product of claim 59 wherein
2 the code for communicating the portions of ~~[[the]]~~ multimedia information ~~corresponding to the~~
3 ~~at least one time range~~ to the recipient comprises code for communicating the portions of ~~[[the]]~~
4 multimedia information via facsimile.

62. (Canceled)

1 63. (Currently amended) The computer program product of claim ~~[[57]]~~47
2 wherein the code for outputting ~~performing the at least one operation~~ comprises code for printing
3 a representation of the portions of ~~[[the]]~~ multimedia information ~~corresponding to the at least~~
4 ~~one time range~~ on a paper medium to generate a second paper document.

64. (Canceled)

1 65. (Currently amended) The computer program product of claim 47 further
2 comprising:

3 code for receiving information indicative of selection of one or more additional
4 identifiers from a ~~second~~-set of identifiers printed on the paper document;
5 code for determining one or more operations based upon the one or more
6 additional identifiers from the ~~second~~-set of identifiers; and
7 code for performing at least one operation from the one or more operations on the
8 portions of [[the]] multimedia information corresponding to the one or more time ranges.

1 66. (Currently amended) The computer program product of claim 65 wherein
2 the code for performing the at least one operation comprises code for ranking the one or more
3 time ranges based upon contents of the portions of [[the]] multimedia information corresponding
4 to the one or more time ranges.

1 67. (Currently amended) The computer program product of claim 66 wherein
2 the code for ranking the one or more time ranges comprises:
3 code for determining, for each time range in the one or more time ranges,
4 relevance of the portion of [[the]] multimedia information corresponding to the time range to a
5 user-specified criterion; and
6 code for ranking the one or more time ranges based upon the relevance of the
7 portions of [[the]] multimedia information corresponding to the time ranges to the user-specified
8 criterion.

1 68. (Original) The computer program product of claim 67 wherein the user-
2 specified criterion identifies a topic of interest.

1 69. (Currently amended) The computer program product of claim 65 wherein
2 the code for performing the at least one operation comprises code for grouping the one or more
3 time ranges into one or more groups based upon contents of the portions of [[the]] multimedia
4 information corresponding to the one or more time ranges.

70-72. (Canceled)